503087886 12/05/2014

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT3134491

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
XIANG AO	05/31/2013
MINGPIANG XU	06/11/2013

RECEIVING PARTY DATA

Name:	MICROSOFT CORPORATION
Street Address:	ONE MICROSOFT WAY
City:	REDMOND
State/Country:	WASHINGTON
Postal Code:	98052

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	13916232

CORRESPONDENCE DATA

Fax Number: (816)421-5547

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using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.

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Address Line 4: KANSAS CITY, MISSOURI 64108

ATTORNEY DOCKET NUMBER:	MFCP.181265
NAME OF SUBMITTER:	CORY W. FISHER
SIGNATURE:	/Cory W. Fisher/
DATE SIGNED:	12/05/2014

Total Attachments: 4

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PATENT 503087886 REEL: 034387 FRAME: 0790

I, Xiang Ao ("ASSIGNOR"; subject matter ("INVENTION") application entitled "Efficient Co	disclosed and/or claimed	or an original joint inventor of din a nonprovisional patent ("APPLICATION"), which:
ASSIGNEE'S legal Grand Blvd., Kan customer number here in parenthes No. 13/9 Office United S Application No., fi was filed or No " Microsoft Corporation, successors and assigns ("ASSIGNEE'S legal Microsoft Corporation successors and assigns ("ASSIGNEE'S legal Application, in and for the United S Applications, in and for the United S Applications of the United S Application	representatives, of Shook isas City, Missouri 6410 45809 (ASSIGNEE'S LEGA Ses (filed on 06/12/2013 16,232 by States Patent and Trademark Iling date, and Office, when and was by the following Office"; a Washington Corporation [SNEE"), is entitled to, and le and interest in the INV and patents derived the United States, its territorical authorizes, and required Application No., filing the Application No.	given Application n, on behalf of itself and its is desirous of acquiring, the ENTION and the APPLICATION erefrom, such as continuing ies, and all foreign countries uests, ASSIGNEE'S LEGAL g date, and Office into the
Application No.	Filing Date	Office
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Page 1 of 2

For good and valuable consideration, the receipt of which is hereby acknowledged by the ASSIGNOR, the ASSIGNOR hereby sells, assigns and transfers to the ASSIGNEE, ASSIGNOR's entire and exclusive rights, title and interest in the INVENTION and the APPLICATION (and APPLICATION DERIVATIVES);

ASSIGNOR agrees to execute all instruments and documents required for the making and prosecution of the APPLICATION (and APPLICATION DERIVATIVES), for litigation regarding letters patent derived therefrom, and for the purpose of protecting and perfecting title to the APPLICATION (and APPLICATION DERIVATIVES).

Xiong to	5/31/2013	
Xiang Ao	Date	
Xiang Ao	表 新	
Printed Name in English	Printed Name in Native Language	
	(if other than English)	

I, <u>Mingpiang Xu</u> ("ASSI	GNOR") am the original	inventor or an original joint
inventor of subject matter ("IN"	VENTION") disclosed and/	or claimed in a nonprovisional
patent application entitled "E	fficient Collaging of a L	arge Image" ("APPLICATION"),
which:		
will be fi ASSIGNEE'S legal Grand Blvd., Kar customer number here in parenther No. 13/9 Office United Application No., f	representatives, of Shool nsas City, Missouri 6416, 45809 (ASSIGNEE'S LEGA ses (filed on 06/12/2013 by State Patent and Tradema illing date, and Office, when	rk) this APPLICATION's en known;
	n and was	
No	by the following Offic	e.
	<u></u>	
successors and assigns ("ASSIG entire and exclusive rights, tit (and all other applications applications, in and for the I ("APPLICATION DERIVATIVES");	GNEE"), is entitled to, and le and interest in the INV and patents derived the United States, its territor authorizes, and reques Application No., filing	ENTION and the APPLICATION erefrom, such as continuing les, and all foreign countries uests, ASSIGNEE'S LEGAL of date, and Office into the
Application No.	Filing Date	Office

Page 1 of 2

5683169 v1

PATENT REEL: 034387 FRAME: 0793

For good and valuable consideration, the receipt of which is hereby acknowledged by the ASSIGNOR, the ASSIGNOR hereby sells, assigns and transfers to the ASSIGNEE, ASSIGNOR's entire and exclusive rights, title and interest in the INVENTION and the APPLICATION (and APPLICATION DERIVATIVES):

ASSIGNOR agrees to execute all instruments and documents required for the making and prosecution of the APPLICATION (and APPLICATION DERIVATIVES), for litigation regarding letters patent derived therefrom, and for the purpose of protecting and perfecting title to the APPLICATION (and APPLICATION DERIVATIVES).

Mingpiang Xu

Mingpiang Xu

Date

MING QIANG XU

Printed Name in English

Printed Name in Native Language

(if other than English)

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5683169 v1

PATENT REEL: 034387 FRAME: 0794